

Appl. No. 10/034,079  
Amdt. dated Jan. 22, 2004  
Reply to Office Action of Oct. 24, 2003

### **REMARKS/ARGUMENTS**

Pursuant to 37 C.F.R. § 1.111, reconsideration of the present application in view of the foregoing amendments and the following remarks is respectfully requested.

Applicants would like to remind the Examiner that the present application is related to pending U.S. Patent Application Serial No. 10/034,021 and pending U.S. Patent Application Serial No. 10/033,860, both of which are currently assigned to U.S. Patent and Trademark Office Art Group 1771.

#### **In the Specification**

The paragraph beginning at page 16, line 18 has been amended to include serial numbers and the present status of the copending applications disclosed in the paragraph.

#### **In the Claims**

Claims 1 – 20 are presented for the Examiner's consideration.

Claim 2 has been amended to correct the inadvertent omission of proper claim reference. Claim 2 is dependent upon claim 1 (see page 2, lines 10-12; page 21, lines 15-20; and claims 1 and 3). No new matter has been added.

Claim 7 has been corrected to address an objection as to informalities.

Claims 1, 19 and 20 have been amended to include the limitation that the energy receptive additive is capable of absorbing electromagnetic energy in a frequency range of 0.01 to 300 GHz and melting the fiber in less than one second. This limitation finds support in the specification at page 17, lines 18 – 25. No new matter has been added.

#### **Summary of the Invention**

This invention relates to a fiber containing an energy receptive additive. The fiber provides rapid heating when subjected to dielectric energy such as radio frequency or microwave radiation. The energy receptive additive has the capability of absorbing electromagnetic energy at a frequency within the range of 0.01 to 300 GHz and melting the fiber in less than one second. The

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energy receptive additive also has a dielectric loss of between about 0.5 and 15, preferably between 1 and 15 and most preferably between 5 and 15. The rapid heating and melting of the fibers is necessary for high-speed industrial applications.

## **Regarding Examiner's Rejections**

### **1. Objection to informalities**

The Examiner's concerns regarding the informalities objected to regarding the paragraph beginning at page 16, line 18 have been addressed. The paragraph has been amended to include the serial numbers and the status of the copending applications referred to in the paragraph.

Additionally, Claim 7 has been amended to correct the informalities objected to by the Examiner. Specifically, the repeats of compounds mentioned twice within the list of compounds have been deleted.

### **2. Rejection for anticipation by Breznak et al.**

By way of the Office Action mailed October 24, 2003, Examiner Gray rejected claims 1 - 11, 14, 16 - 17 and 18 - 19 under 35 U.S.C. § 102(b) as allegedly being anticipated by Breznak et al. (U.S. Patent No. 5,916,506). This rejection is respectfully traversed to the extent that it may apply to the present claims.

Breznak teaches a bicomponent fiber having a sheath/core structure where carbon black is dispersed in the sheath component (column 2, lines 54-61). The additive is present in an amount of at least 3% and preferably in an amount of about 5% to about 15% (column 3, lines 54-55). Additionally, Breznak also teaches that the fiber is stretched (column 3, line 66).

The present invention includes the limitation in independent claims 1 and 19 that the energy receptive additive is capable of absorbing electromagnetic energy at a frequency within the range of 0.01 to 300 GHz and melting the fiber in less than one second (see claim 1, claim 19, and specification at page 17, lines 18 - 25). Breznak does not teach such an element.

Claims 2 - 11, 14, and 16 - 18 are all dependent on claim 1 and thus contain all the limitations of claim 1.

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Because Breznak fails to disclose each and every element of Applicants' claims as amended, Applicants respectfully submit that Breznak does not anticipate claims 1 - 11, 14, 16 - 17 and 18 - 19 in the sense of 35 U.S.C. §102(b) and the rejection should be withdrawn.

### 3. Rejection for anticipation by Hull

By way of the Office Action mailed October 24, 2003, Examiner Gray rejected claims 1 - 20 under 35 U.S.C. § 102(b) as allegedly being anticipated by Hull (U.S. Patent No. 3,803,453). This rejection is respectfully **traversed** to the extent that it may apply to the present claims.

Hull teaches a bicomponent fiber having a sheath/core structure where carbon black is dispersed in the core in an amount of 15 to 50% by weight and the sheath contains titanium dioxide in an amount of 2 to 7% by weight (abstract, claim 2 and claim 7). Additionally, Hull also teaches that the fiber can be crimped and drawn (column 5, line 62 through column 6, line 12).

The present invention includes the limitation in independent claims 1, 19 and 20 that the energy receptive additive is capable of absorbing electromagnetic energy at a frequency within the range of 0.01 to 300 GHz and melting the fiber in less than one second (see claim 1, claim 19, claim 20 and specification at page 17, lines 18 - 25). Hull does not teach such an element.

Claims 2 - 18 are all dependent on claim 1 and thus contain all the limitations of claim 1.

Because Hull fails to disclose each and every element of Applicants' claims as amended, Applicants respectfully submit that Hull does not anticipate claims 1 - 20 in the sense of 35 U.S.C. §102(b) and the rejection should be withdrawn.

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For the reasons stated above, it is respectfully submitted that all of the presently presented claims are in form for allowance.

Please charge any prosecutorial fees which are due to Kimberly-Clark Worldwide, Inc. deposit account number 11-0875.

The undersigned may be reached at: (770) 587-8096.

Respectfully submitted,

ABUTO ET AL.

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#### CERTIFICATE OF FACSIMILE TRANSMISSION

I, Nathan Hendon, hereby certify that on January 22, 2004, this document is being sent by facsimile to the United States Patent and Trademark Office, central facsimile number for all patent application related correspondence, at 703-872-9306.

By: 

Nathan Hendon